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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	YAGYU, Walter T.
Appl. No.	:	10/020,275
Filed	:	December 18, 2001
Title	:	TIE ROD WITH APPLICATION OF POLYMER COMPOSITE WITH FIBERS REINFORCEMENT
Group Art Unit	:	3679
Examiner	:	FERGUSON, M.
Docket No.	:	08200.608

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REPLY BRIEF UNDER 37 C.F.R. § 1.193

April 21, 2006

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Examiner's Answer mailed March 22, 2006, Appellant respectfully requests the Board of Patent Appeals and Interferences to consider the following additional arguments and reverse the decision of the Examiner in whole.

No fees are deemed necessary at this time; however, the Commissioner is hereby authorized to charge applicant's deposition account no. 50-0548 to maintain the pendency of this application.

REMARKS

Although conceding that the housing of Pazdirek is formed of a composite material, the Examiner maintains that the metal and composite materials are interchangeable known alternative. In other words, the Examiner admits that the prior art fails to teach a combination of the tie rod made of a polymer composite with fiber reinforcement and the metallic ball-joint box or housing. However, the Examiner alleges that it would have been obvious to one of ordinary skill in the art to modify the tie rod of Shimizu to have a stem made of a composite material as taught by Pazdirek "as metal and composite materials are interchangeable known alternatives, and the use of metal tie rod components with composite tie rod components is known within the art."

Applicant reiterates that the fact that the metal and composite materials are not interchangeable is confirmed by Pazdirek himself which discloses that the plastic housing is preferably assembled to the metal link by first heating the end of the metal link to a temperature higher than the softening temperature of the housing. The alternative composite link of Pazdirek is adhesively secured to the housing. In other words, the physical characteristics of the metal and composite materials are very different. Thus, the metal and composite materials are not interchangeable. Secondly, Pazdirek fails to disclose the housing made of metal material, hence the combination of the tie rod made of a polymer composite material with fiber reinforcements and the metallic ball joint box.

Therefore, it would not have been obvious to one of ordinary skill in the art to modify the tie rod of Shimizu to have a stem made of a composite material as taught by Pazdirek.

Furthermore, the examiner fails to address Applicants arguments regarding the ball joint of Kobayashi. Contrary to the Examiner's allegations Kobayashi fails to disclose the stem of the tie rod made of material comprising a polymer composite with fiber reinforcements and the metallic ball joint box. Kobayashi teaches a ball joint including a single-piece housing having two inner chambers in which spherical head portions of ball studs are housed, connected by a link. The housing is formed of a composite material composed by mixing inorganic filler, e.g., glass fiber in polypropylene. In other words, Kobayashi fails to disclose the stem of the tie rod and the separate ball joint box made of different materials.

The Examiner erroneously alleges that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Shimizu, Pazdirek and Kobayashi, and that the combination of Shimizu, Pazdirek and Kobayashi would constitute the claimed invention as recited in claim 1.

As stated in In re Kotzab, 217 F.3d 1365, 1369-70,55 USPQ2d 1313, 1316 (Fed. Cir. 2000): Most if not all inventions arise from a combination of old elements. Thus, every element of a claimed invention may often be found in the prior art. However,

identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant [citations omitted].

MPEP 2143.01 specifically states that the mere fact that reference can be modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992). There is no suggestion to support the Examiner's assertion. Clearly, contrary to the examiner's allegations, Shimizu, Pazdirek and Kobayashi cited by the Examiner fail to disclose or present any motivation or suggestion to provide the combination of the tie rod made of a polymer composite material with fiber reinforcements and the metallic ball joint box.

The Examiner's assertion that these references may be modified to achieve the limitations of the present invention would clearly result from **hindsight reconstruction**.

The Examiner has simply reconstructed the Applicant's claimed invention. This type of obviousness analysis/determination is not proper.

Therefore, the Examiner's rejection of claim 1 under 35 U.S.C. 103(a) is improper.

In view of the above reasons, it is respectfully submitted that this application is in condition for allowance, and the rejection of claims of the present invention should be overruled.

Respectfully submitted:
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